

1 WHAT IS CLAIMED IS:

5

1. A power control apparatus comprising:

a first driven circuit;

a second driven circuit connected to the
first driven circuit;

10

a primary power-supply circuit for
producing a primary voltage from a source voltage of a
battery and supplying the primary voltage to drive the
first driven circuit;

15

a secondary power-supply circuit for
producing a secondary voltage from the source voltage of
the battery or from the primary voltage of the primary
power-supply circuit, and for supplying the secondary
voltage to drive the second driven circuit; and

20

control means for outputting a power-supply
control signal to the secondary power-supply circuit in
response to a command signal, so that the supply of the
secondary voltage to the second driven circuit by the
secondary power-supply circuit is started or terminated by
the power-supply control signal.

25

26

1 2. The apparatus according to claim 1,
wherein the control means outputs a high-state power-
supply control signal to the secondary power-supply
circuit in response to a start command signal output by
5 the first driven circuit, the high-state power-supply
control signal causing the secondary power-supply circuit
to start the supply of the secondary voltage to the second
driven circuit.

10

 3. The apparatus according to claim 1,
wherein the control means outputs a low-state power-supply
15 control signal to the secondary power-supply circuit in
response to an end command signal output by the first
driven circuit, the low-state power-supply control signal
causing the secondary power-supply circuit to terminate
the supply of the secondary voltage to the second driven
20 circuit.

25

4. A power control apparatus comprising:

27

1 a first driven circuit;

 a second driven circuit connected to the
first driven circuit;

5 a primary power-supply circuit connected to
a battery, the primary power-supply circuit producing a
primary voltage from a source voltage of the battery and
supplying the primary voltage to drive the first driven
circuit;

10 a secondary power-supply circuit connected
to the primary power-supply circuit, the secondary power-
supply circuit producing a secondary voltage from the
source voltage of the battery or from the primary voltage
of the primary power-supply circuit and supplying the
secondary voltage to drive the second driven circuit;

15 a primary oscillation part for outputting a
clock signal to the first driven circuit;

 a primary reset generating part for
outputting a primary reset signal to the first driven
circuit when an oscillation of the primary oscillation
20 part is detected to be stable, the primary reset signal
causing the first driven circuit to start operation in
accordance with the clock signal output by the primary
oscillation part;

25 a control signal generating part, connected
to both the first driven circuit and the secondary power-

28

1 supply circuit, for outputting a power-supply control
signal to the secondary power-supply circuit in response
to a command signal output by the first driven circuit, so
that the supply of the secondary voltage to the second
5 driven circuit by the secondary power-supply circuit is
started or terminated by the power-supply control signal;
a secondary oscillation part for outputting
a clock signal to the second driven circuit; and
a secondary reset generating part for
10 outputting a secondary reset signal to the second driven
circuit when an oscillation of the secondary oscillation
part is detected to be stable, the secondary reset signal
causing the second driven circuit to start operation in
accordance with the clock signal output by the secondary
15 oscillation part.

20 5. The apparatus according to claim 4,
wherein the secondary oscillation part includes a gate
circuit and a phase-locked loop PLL circuit, the gate
circuit having a first input connected to an output of the
control signal generating part, a second input connected
25 to an output of the primary oscillation part, and an

29

1 output connected to an input of the PLL circuit, the gate
circuit passing the clock signal from the primary
oscillation part to the PLL circuit when a high-state
power-supply control signal is received at the first
5 input, the PLL circuit producing a clock signal with a
locked frequency when a high-state clock signal output by
the gate circuit is received, and supplying the clock
signal to the second driven circuit.

10

6. The apparatus according to claim 4,
wherein the second driven circuit includes a buffer gate
15 at an input of the second driven circuit, the input of the
second driven circuit being connected to an output of the
first driven circuit via a signal line, the buffer gate,
when a data signal set in a high state by the first driven
circuit is received from the signal line, converting the
20 received data into a high-state data signal based on the
secondary voltage.

25

30

1 7. The apparatus according to claim 6,
wherein the buffer gate includes a resistor and a metal-
oxide-semiconductor transistor connected in series between
a secondary voltage line and a grounded base.

5

8. The apparatus according to claim 4,
10 wherein the first driven circuit includes a gate circuit
at an input of the first driven circuit, the input of the
first driven circuit being connected to an output of the
second driven circuit via a signal line, the gate circuit
having a first input connected to the signal line and a
15 second input connected to an output of the control signal
generating part, the gate circuit enabling the first
driven circuit to receive a data signal from the signal
line when a high-state power-supply control signal output
by the control signal generating part is received at the
20 second input, and when the data signal that is set in a
high state by the second driven circuit is received, the
gate circuit converting the received data into a high-
state data signal based on the primary voltage.

25

31

1 9. The apparatus according to claim 8,
wherein the gate circuit includes a resistor and two
metal-oxide-semiconductor transistors connected in series
between a primary voltage line and a grounded base.

5

10 10. The apparatus according to claim 4,
wherein the control signal generating part outputs a high-
state power-supply control signal to the secondary power-
supply circuit in response to a start command signal
output by the first driven circuit, the high-state power-
supply control signal causing the secondary power-supply
15 circuit to start the supply of the secondary voltage to
the second driven circuit.

20

 11. The apparatus according to claim 4,
wherein the control signal generating part outputs a low-
state power-supply control signal to the secondary power-
supply circuit in response to an end command signal output
25 by the first driven circuit, the low-state power-supply

32

1 control signal causing the secondary power-supply circuit
to terminate the supply of the secondary voltage to the
second driven circuit.

5

10

15

20

25

23